FORESTWIDE STANDARDS

Note to Reader: The forestwide standards below are from the Jefferson NF Forest Plan (2004). Our goal is to keep management direction as consistent as possible between the GWNF and the JNF. However, we have noted some standards that are not applicable to the GWNF, some that need modification and a few new standards.

STANDARDS OVERVIEW

Standards (36 CFR 219.11(c)): Standards set the sideboards for achieving the goals, objectives and desired conditions, as well as provide meaningful direction when implementing projects

While desired conditions and objectives define where we are headed with management of the George Washington National Forest, standards define the "boundaries" we are to follow in designing projects. Standards often suggest limitations on management activities or resource uses, generally for environmental protection, public safety, or resolution of an issue. In essence, standards put a condition on the application of a generally suitable use.

In addition to the standards found in this Revised Plan, the Forest is required to comply with applicable laws, executive orders, and regulations. Manuals, handbooks, and new germane scientific information are followed and considered during site-specific project analysis as well.

Watershed Resources

Water and Soil Quality

FW-1: Resource management activities that may affect soil and/or water quality meet or exceed Virginia and West Virginia Best Management Practices, State Erosion Control Handbooks, and standards in this Forest Plan.

FW-2: Locate all facilities (e.g. trails, trail shelters, restrooms, designated campsites, etc.) in a manner that minimizes the possibility of contamination of water sources. Educate users on "leave no trace" camping practices, including sanitation practices that minimize the potential for contamination of water sources.

FW-3: Prior to authorizing or re-authorizing new or existing diversions of water from streams or lakes, determine the instream flow or lake level needs sufficient to protect stream processes, aquatic and riparian habitats and communities, and recreation and aesthetic values.

FW-4: Water is not diverted from streams (perennial or intermittent) or lakes when an instream flow needs or water level assessment indicates the diversion would adversely affect protection of stream processes, aquatic and riparian habitats and communities, or recreation and aesthetic values.

FW-5: On all soils dedicated to growing vegetation, the organic layers, topsoil and root mat will be left in place over at least 85% of the activity area[2] and revegetation is accomplished within 5 years.

FW-6: Locate and design management activities to avoid, minimize, or mitigate potential erosion.

FW-7: Use ditchlines and culverts when new permanent road construction grades are more than 6% and the road will be managed as open for public use.

FW-8: ~~To limit soil compaction, no heavy equipment is used on plastic soils when the water table is within 12 inches of the surface, or when soil moisture exceeds the plastic limit. Soil moisture exceeds the plastic limit when soil can be rolled to pencil size without breaking or crumbling.~~ **REPLACE JNF Forest Plan standards FW-8 and FW-9 with the following:** Water saturated soils in areas expected to produce biomass should not receive vehicle traffic or livestock trampling to prevent excessive soil compaction. Replaces FW-8&9.

FW-9: ~~Heavy equipment is operated so that soil indentations, ruts, or furrows are aligned on the contour and the slope of such indentations is 5 percent or less.~~ **See the modification above.**

FW-10: ~~Management activities that cause bare mineral soil on slopes greater than 5% will have erosion control planned and implemented.~~ **REPLACE JNF Forest Plan standard FW-10 with the following**: Where soils are disturbed by management activities, appropriate revegetation measures should be implemented. When outside the local seeding seasons, initial treatments may be of a temporary nature, until permanent seeding can be applied. Revegetation should be accomplished within 5 years. For erosion control, annual plants should make up >50% of seed mix when seeding outside the primary seeding season and the area should be reseeded with perennials within 1½ years.

Other Guideline Sources
FSM 2507.06
Virginia's Forestry Best Management Practices for Water Quality, 2002
West Virginia Silvicultural Best Management Practices for Controlling Erosion and Sedimentation from Logging Operations, 2005
Virginia Erosion Control Handbook
West Virginia Erosion and Sediment Control Manual
Clean Water Act, Section 404
Corps of Engineers, Norfolk Office Regulatory Division
COE Nationwide permits
Norfolk District Regional Permits, Letters of Permission, and State Program General Permit
Corps of Engineers, Pittsburgh Office Regulatory Branch
COE Nationwide permits for West Virginia
Virginia state water quality standards
West Virginia state water quality standards
Virginia Agricultural Best Management Practices
Virginia Onsite Sewage Treatment Regulations
West Virginia Onsite Sewage Treatment Regulations

Air Quality

Standards for air quality related to wildland fire and prescribed fire are found in the Fire Management section of Chapter 2.

FW-11: Conduct all National Forest management activities (including permitted activities) in a manner that does not result in a significant contribution to: (1) a violation of National Ambient Air Quality Standards; or (2) a violation of applicable provisions in the State Implementation Plan.

Riparian Areas and Corridors

Riparian areas and corridors are managed according to Management Prescription Area 11. See Appendix C for the definitions of riparian areas and corridors.

Channeled Ephemeral Zones

The following standards apply to 25 feet on each side of a channeled ephemeral stream and 25 feet upstream for the point at which the scoured channel begins (the "nick point").

FW-12: Motorized vehicles are restricted in the channeled ephemeral zone to designated crossings. Motorized vehicles may only be allowed on a case-by-case basis, after site-specific analysis, in the channeled ephemeral zone outside of designated crossings.

FW-13: Management activities expose no more than 10% mineral soil in the channeled ephemeral zone.

FW-14: Up to 50% of the basal area may be removed down to a minimum basal area of 50 square feet per acre. Removal of additional basal area is allowed on a case-by-case basis when needed to benefit riparian-dependent resources.

FW-15: Permitted firewood cutting within the channeled ephemeral zone must take into consideration large woody debris needs. Ranger Districts will identify areas where firewood cutting is not permitted due to large woody debris concerns.

FW-16: At least partial suspension is required when yarding logs over channeled ephemerals.

FW-17: Large woody debris may be removed if it would otherwise pose a risk to water quality, degrades habitat for aquatic or riparian wildlife species, impedes water recreation (e.g. rafting), or when it poses a threat to private property or Forest Service infrastructure (e.g. bridges). The need for removal is determined on a case-by-case basis.

FW-18: The addition of large woody debris in channeled ephemeral reaches will primarily be through passive recruitment rather than active placement.

FW-19: New human-constructed impoundments are allowed on a case-by-case basis, following evaluation of downstream instream flow needs.

FW-20: When crossing channeled ephemeral streams, culverts, temporary bridges, hardened fords, or corduroy are used where needed to protect channel or bank stability.

FW-21: Construction of crossings is completed on all channeled ephemerals as soon as possible after work has started on the crossing. Permanent and temporary roads on either side of crossings within the channeled ephemeral zone are graveled.

FW-22: If culverts are removed, banks and channel must be restored to a natural size and shape. All disturbed soil must be stabilized.

FW-23: Trails, campsites, and other recreational developments are located, constructed, and maintained to minimize impacts to channel banks and to prevent other resource damage. When existing facilities are causing unacceptable resource damage, appropriate mitigation measures will be implemented. Soils are stabilized on eroding trails and recreational sites.

FW-24: New non-motorized trail construction is allowed to improve existing trail configuration and improve access.

FW-25: New motorized trails are prohibited within the channeled ephemeral zone except at designated crossings or where the trail location requires some encroachment; for example, to accommodate steep terrain.

FW-26: Motorized and non-motorized trail reconstruction and relocation within the channeled ephemeral zone are allowed to reduce impacts to riparian and aquatic resources.

FW-27: Where grazing is currently allowed and under a permit, control and mitigate to restore, enhance, or maintain the integrity of channels and banks. Grazing permit reauthorization is allowed, provided progress towards mitigation of negative impacts on the channeled ephemeral zones has occurred. New grazing permits will be designed to prevent negative

impacts to the channeled ephemeral zone. Livestock will be excluded from channeled ephemeral zones whenever the zone cannot be maintained or restored otherwise.

FW-28: Feeding troughs and salt and mineral blocks are not allowed inside the channeled ephemeral zone. Watering troughs are appropriately located to protect the streams.

FW-29: During prescribed fire operations in the channeled ephemeral zone, use the least ground disturbing method of fireline construction, favoring blacklines and handtools.

FW-30: Do not disk, blade, or plow fireline within the ephemeral stream channels, use them as natural firebreaks. (This applies to the actual stream channel, not the entire 25 foot zone.)

FW-31: Revegetate and waterbar firelines as quickly as possible, where necessary to prevent erosion. Use water diversions to keep sediment out of channels.

Other Guideline Sources
George Washington and Jefferson National Forests Federally Listed Threatened and Endangered Mussel and Fish Conservation Plan (March 2004)
Virginia's Forestry Best Management Practices for Water Quality (July 2002)
West Virginia Silvicultural Best Management Practices for Controlling Soil Erosion and Sedimentation from Logging Operations (2005)

Aquatic Species

See Management Prescription Area 11 (Riparian Areas) for aquatic species management direction.

Wildlife Habitat Management

FW-32: Retain soft mast producing species (dogwood, black gum, hawthorne, grapes, serviceberry, etc.) during vegetation management treatments when consistent with overall regeneration and species composition objectives.

FW-33: Potential black bear den trees will be retained during all vegetation management treatments. Potential den trees are those that are greater than 20" diameter breast height which are hollow with broken tops or those with limbs greater than 12 inches diameter broken near the bole of the tree.

Other Guideline Sources
Cow Knob Salamander Agreement
Bald and Golden Eagle Act
Migratory Bird Treaty Act

Threatened, Endangered and Sensitive Species Management

FW-34: Maintain records of locations and conditions of federally listed threatened and endangered species, and of Regional Forester's sensitive species within the planning area.

FW-35: Control non-native invasive species where they are causing negative effects to threatened, endangered, or sensitive species. Do not intentionally introduce non-native species that are known or suspected of causing negative effects to federally listed threatened and endangered species in or near sites supporting these species.

FW-36: Do not issue permits for collection of threatened, endangered, sensitive, and locally rare species, except for approved scientific purposes.

Bald Eagle Management

FW-37: Delineate and maintain 1,500 foot protection zones around all bald eagle nest and communal roost sites until they are determined no longer suitable. Management activities that modify the forest canopy within this zone are designed to be compatible with recovery of this species. **NEW INFORMATION - The bald eagle has been delisted by the U.S. Fish and Wildlife Service. It is now a sensitive species and there may be some guidelines in the Bald and Golden Eagle Act that we want to incorporate.**

Peregrine Falcon Management

FW-38: Post and enforce seasonal closure orders near active peregrine falcon nests during season of use to control human disturbance. **NEW INFORMATION - The peregrine falcon has been delisted by the U.S. Fish and Wildlife Service. It is now a sensitive species (there are no known nests on the GWNF).**

Northern Flying Squirrel Management

FW-39: Northern hardwood forests within ½ mile of known occupancy of northern flying squirrels are not modified by management actions unless compatible with recovery of this species. **NEW INFORMATION – Although the subspecies on the JNF is still endangered, the subspecies on the GWNF has been delisted by the U.S. Fish and Wildlife Service. It is now a sensitive species. There may be guidelines we want to incorporate.**

FW-40: ~~Known occurrences of the northern flying squirrel are allocated to Management Prescriptions 4K3 and 4K4 to ensure protection and maintenance of their current populations and surrounding habitat conditions. (See Chapter 3 for these Management Prescriptions for additional management direction related to the northern flying squirrel.)~~ **This standard is applicable only on the JNF.**

Management of Federally-listed Plants

FW-41: Known occurrences of '~~Virginia spirea~~ **(not on GWNF)** small-whorled pogonia, northeastern bulrush, and ~~Virginia round-leaf birch~~ **(not on GWNF)** are allocated to Management Prescriptions 4D to ensure protection and maintenance of their current populations and surrounding habitat conditions.

FW-42: ~~Continue cooperative efforts to contribute to the recovery of Peters Mountain mallow where it occurs on non-Forest Service lands.~~ **This standard is applicable only on the JNF.**

Gray Bat and Virginia Big-Eared Bat Management

FW-44: ~~Maintain a ¼ mile buffer of undisturbed forest around gray bat maternity and hibernation colony sites and Virginia big-eared bat maternity, bachelor, or winter colony sites. Prohibited activities within this buffer include cutting of overstory vegetation, construction of roads, trails, or wildlife openings, and prescribed burning. Exceptions may be made when compatible with recovery of these species.~~ This standard is applicable only on the JNF.

Peaks of Otter Samalander Management

FW-43: This species is not found on the GWNF. This standard is applicable only on the JNF.

Indiana Bat Management

FW-45: Each Indiana bat hibernaculum has a primary and secondary cave protection area managed according to management prescription 8E4. If additional hibernacula are found,

the desired condition and standards of management prescription 8E4 apply until an environmental analysis to consider amendment to the Forest Plan is completed.

FW-46: In order to promote potential summer roost trees and maternity sites for the Indiana bat throughout the Forest, planned silvicultural practices in hardwood-dominated forest types will leave all shagbark hickory trees greater than 6 inches d.b.h.[3] and larger, except when they pose a safety hazard. In addition:

- Clearcut openings 10 to 25 acres in size will also retain a minimum average of 6 snags or cavity trees per acre, 9 inches d.b.h. or larger, scattered or clumped.
- Group selection openings and clearcuts less than 10 acres in size have no provision for retention of a minimum number of snags, cavity trees, or residual basal area due the small opening size and safety concerns.
- All other harvesting methods (and clearcut openings 26-40 acres in size) will retain a minimum residual 15 square feet of basal area per acre (including 6 snags or cavity trees) scattered or clumped. Residual trees are greater than 6 inches d.b.h. with priority given to the largest available trees, which exhibit characteristics favored as roost trees by Indiana bats.

FW-47: To insure a continuous supply of roost trees and foraging habitat, the following forest-wide conditions must be maintained:

- Minimum of 60% of the combined acreage of all CISC[4] Forest Types on the Forest will be maintained over 70 years of age; AND
- Minimum of 40% of the combined acreage of all CISC Forest Types 53 (white oak, red oak, hickory) and 56 (yellow poplar, white oak, red oak) will be maintained at an age greater than 80 years old.

FW-48: When active roost trees are identified on the Forest, they will be protected with a ¼ mile buffer surrounding them. This protective buffer remains until such time the trees and associated area no longer serve as a roost (e.g., loss of exfoliating bark or cavities, blown down, or decay).

FW-49: No disturbance that will result in the potential taking[5] of an Indiana bat will occur within this active roost tree buffer.

- Commercial timber harvesting, road construction, and use of the insecticide diflubenzuron are prohibited.
- Prescribed burning, timber cutting, road maintenance, and integrated pest management using biological or species-specific controls during non-roosting season are allowed, following project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats and the hibernacula.
- Other activities within this buffer are allowed following determination that they will not result in a potential taking of an Indiana bat.

FW-50: Removal of known Indiana bat **active roost trees** will be avoided, except as specified in the next 2 standards.

FW-51: If during project implementation, **active roost trees** are identified, all project activity will cease within a ¼ mile buffer around the roost tree until consultation with U.S. Fish and Wildlife Service is completed to determine whether project activities can resume.

FW-52: In the event that it becomes absolutely necessary to remove a known Indiana bat active roost tree, such a removal will be conducted during the time period when the bats are likely to be in hibernation (November 15 through March 31), through informal consultation with the U.S. Fish and Wildlife Service. Trees identified as immediate threats to public safety may be removed when bats are not hibernating; however, informal

consultation with U.S. Fish and Wildlife Service is still required. Examples of immediate threats to public safety include trees leaning over a trail, public road or powerline that could fall at any time due to decay or damage.

FW-53: Prescribed burning is allowed to maintain flight and foraging corridors in upland and riparian areas potentially used by bats in the summer. To avoid injury to non-flying young Indiana bats, prescribed burning of active maternity roosting sites between June 1 and August 1 is prohibited.

FW-54: Opportunities should be sought to include creation of drinking water sources for bats in project plans, where appropriate, in areas where no reliable sources of drinking water are available. Opportunities will be considered when the creation is not detrimental to other wetland-dependent species (I.e., damage to natural springs and seeps).

FW-55: If **active maternity roost sites** are identified on the Forest, they will be protected with a 2-mile buffer defined by the maternity roost, alternate roost sites, and adjacent foraging areas.

FW-56: No disturbance that will result in the potential taking of an Indiana bat will occur within this active maternity roost site buffer.

- Commercial timber harvesting, road construction, and use of all pesticides are prohibited.
- All other activities within this buffer will be evaluated during project level analysis to determine the direct, indirect, and cumulative effects on Indiana bats, through informal consultation with the U.S. Fish and Wildlife Service.

FW-57: If during project implementation, active maternity roost sites are identified, all project activity will cease within a 2-mile buffer around the maternity roost until consultation with U.S. Fish and Wildlife Service is completed to determine whether project activities can resume.

FW-58: Monitoring of timber sales and other activities will be implemented as follows:

- Timber sale administrators or biologists will conduct and report normal inspections of all timber sales to ensure that measures to protect the Indiana bat have been implemented. Timber sale administrators will conduct normal inspections of all timber sales to administer provisions for protecting residual trees not designated for cutting under provisions of the timber sale contract. Unnecessary damage to residual trees will be documented in sale inspection reports and proper contractual or legal remedies will be taken. The Forest will include this information in their annual monitoring reports and make available to the U.S. Fish and Wildlife Service, if requested.
- Informal consultations among the U.S. Fish and Wildlife Service and the Forest will occur as needed in order to review and determine any need to modify provisions of the biological opinion, and other issues regarding the Indiana bat.

FW-59: Where appropriate, training should be conducted for employees regarding bats in the National Forests. Training should include sections on bat identification, biology, habitat requirements, and sampling techniques.

FW-60: Develop informational and educational displays about bats to inform the public about this misunderstood group of mammals.

Rare Communities

FW-61: In cooperation with the States' Natural Heritage agencies, make appropriate adjustments to Management Prescription Area 4D through the Forest Plan amendment process as new rare community information becomes available.

FW-62: Maintain records of rare community locations and conditions across the forest. Survey project areas for rare communities prior to implementing projects that have the potential to negatively affect them.

Caves

FW-63: A minimum of 200 foot buffers are maintained around cave entrances, sinkholes, and cave collapse areas known to open into a cave's drainage system. There are no soil-disturbing activities or harvest of trees within this buffer. Wider buffers are identified through site-specific analysis when necessary to protect caves from potential subterranean and surface impacts. Perennial, intermittent, channeled ephemeral stream standards will apply beyond the first 200 feet.

FW-64: The use of caves for disposal sites or the alteration of cave entrances is prohibited except for the construction of cave gates or similar structures to ensure closure.

FW-65: Management activities within any area draining into a cave are limited if they may affect the cave ecosystem through sedimentation, soil sterilization, the addition of nutrients or other chemicals (including pesticides and fertilizers), or if they change the cave's natural hydrology or micro-climate.

FW-66: Post and enforce seasonal closure orders around entrances of caves and abandoned mines occupied by significant populations of bats, to reduce the frequency and degree of human intrusion. Prohibit camping and campfires at the entrance to caves, mines, and rock shelters used by bats.

FW-67: If such closure orders are found to be ineffective, construct and maintain gates or other structures that allow for entrance and egress by bats. If necessary to further discourage human disturbance to caves occupied by significant populations of bats, close non-essential public access routes controlled by the Forest Service within ¼ mile of cave entrances during periods of use by bats.

FW-68: Human access to caves for educational and recreation use may be allowed during periods when bats are not present. If damage to a cave occurs as a result of such use, close the cave. Allow human access (i.e. scientific study) on a case-by-case basis when bats are present.

FW-69: The specific location of a Significant cave cannot be made available to the public unless it is determined that disclosure of this information would not create a substantial risk of harm, theft, or destruction of the cave. Significant and potentially significant caves on the Forest are managed in accordance with the Cave Resources Protection Act of 1988 (16 U.S.C. 4301-4309) to protect them through regulating their use, requiring permits for removal of their resources, and prohibiting destructive acts.

Vegetation

FW-70: Structural diversity may be increased through pre-commercial thinning, commercial thinning, uneven-aged management, creating canopy gaps and openings 0.25 to 2 acres in size using non-commercial cut and leave treatments, or a combination of these treatments when compatible with the desired condition and standards of the appropriate management prescription. Due to practical considerations, these treatments typically

occur on slopes less than 30%, although there is no restriction on steeper slopes if feasible. Even-aged stand regeneration treatments, where desired, may occur later in the life of these stands.

FW-71: When regenerating forest stands, regenerate to native tree species that commonly occur naturally on similar sites within that land type association.

FW-72: To the extent practical, control threats from insects and disease in montane spruce-fir forests.

FW-73: Design all silvicultural treatments in montane spruce-fir forests to maintain or restore the forest type. Silvicultural treatments will not be used for the purpose of creating early successional habitat or for conversion to other forest types.

FW-74: During silvicultural treatments in all forest types, patches of live Eastern hemlock greater than ¼ acre are retained.

FW-75: In order to maintain future restoration opportunities, do not cut live Carolina hemlock. Exceptions may be made to provide for public safety, protection of private resources, insect and disease control, or research.

FW-76: During silvicultural treatments, retain all live butternut with more than 50% live branches. Record the approximate location of these trees and notify the Forest Silviculturist.

Old Growth

FW-77: Inventory stands for existing old growth conditions during project planning using the criteria in Appendix D (*Guidance for Conserving and Restoring Old Growth Forest Communities on National Forests in the Southern Region* (Forestry Report R8-FR 62, June 1997)). Consider the contribution of identified patches to the distribution and abundance of the old growth community type and to the desired condition of the appropriate prescription during project analysis. For purposes of project planning, the following forest types are considered well-represented in the current inventory of existing old growth for the George Washington National Forest: the Dry Mesic Oak Type and Dry & Dry-mesic Oak-pine Forests and may by cut through resource management activities.

FW-78: Following project analysis, make appropriate adjustments to Management Prescription 6A, 6B, or 6C, depending on community type, through the Forest Plan amendment process. **NOTE: Because there is no current old growth inventory on the GWNF that has been field verified as was done for the Jefferson NF, there are no proposed Management Prescription Areas 6A, 6B or 6C at this time. Inventoried old growth will be identified, mapped and subject to old growth management direction in the GWNF Forest Plan.**

Forest Disturbances

Gypsy Moth

FW-79: Integrated Pest Management is used to protect resources from damage caused by the gypsy moth.

FW-80: Slow the Spread actions are allowed to slow the gypsy moth's rate of spread from the areas where it is established.

FW-81: Suppression actions are allowed to reduce damage caused by outbreaks where gypsy moths are established as identified by the entomologists with the Forest Health Protection Unit of the Forest Service. Suppression treatments available for use in gypsy moth suppression include, but are not limited to, the bacterial insecticide *Bacillus thuringiensis* var. *kurstaki*, the chemical insect growth regulator diflubenzuron, and the gypsy moth specific biological insecticide *Gypchek*.

FW-82: Eradication actions are allowed to eliminate isolated infestations of gypsy moth that are newly detected.

FW-83: The development, improvement, or testing of high population treatment tactics (insecticide application), low population treatment tactics (mating disruption, sterile insect release fungal application, insecticide application, and mass trapping) and introduction of natural enemies may be considered in all forest areas except Wilderness, areas under study for possible wilderness inclusion and where indicated in specific management prescriptions.

Southern Pine Beetle

FW-84: Integrated Pest Management is used to prevent or control damage caused by the southern pine beetle.

FW-85: Use hazard rating models and silvicultural treatments to reduce risk of southern pine beetle infestation in pine forests.

Non-native Invasive Plant Species

FW-86: The use of Category 1 Species is prohibited.

FW-87: The establishment or encouragement of Category 2 Species is prohibited in areas where ecological conditions would favor invasiveness and is discouraged elsewhere. Projects that use Category 2 Species should document why no other (non-invasive) species will serve the purpose and need.

FW-88: Favor use of native grasses and wildflowers beneficial as wildlife foods when seeding temporary roads, skid roads, log landings and other temporary openings when slopes are less than 5%. On slopes greater than 5%, favor use of vegetation that best controls erosion.

FW-xxx: **NEW STANDARD** Planning for management activities includes consideration of existing and potential non-native invasive plant (NNIP) threats. Site-specific plans should include control/eradication treatments and follow up monitoring of those treatments for effectiveness. In timber sales, for example, invasive species surrounding areas cleared for log landings or haul roads should be identified and treated.

Pesticides

FW-89: Application is supervised by a certified pesticide applicator. Workers who apply pesticides are trained to ensure minimum impacts and maximum effectiveness. Only those methods that assure proper application of pesticides are used.

Insecticides

FW-90: Insecticides known to have negative impacts on aquatic ecosystems are not aerially applied within 200 feet~~, nor ground applied within 30 horizontal feet~~ of perennial streams, wetlands, or open bodies of water. **MODIFICATION to allow treatment of hemlock wooly adelgid in riparian areas -** The use of imidapropylcid/insecticides for hemlock wooly adelgid, may be ground applied only if: 1) they pose a low risk of soil movement and groundwater contamination; 2) only where there is enough soil and organic matter to prevent the chemical from moving; 3) in the case of soil injection, no injections deeper than the O/A horizon occur; 4) they are used at the lowest effective rate; and 5) the soil is not saturated.

FW-91: A notice of intent to aerially apply insecticides or other aerially applied intervention tactics (e.g. pheromone flakes) is posted on signs prior to treatment. Signs are placed along roads and trails at major entry points to the treatment area. For wilderness areas, the notice of intent is placed outside the wilderness area at major trailheads. Wilderness areas have signs in place at least one week prior to treatment. Signs inform visitors of the type of intervention tactic and the time span in which application may occur, thus allowing visitors the option of minimizing or avoiding exposure to the treatment.

FW-92: Treatment of developed recreation areas such as picnic areas and campgrounds or dispersed areas of high concentrated use should be scheduled during low-use periods, or the areas are temporarily closed in order to minimize human exposure to the treatment. Signs are posted in these areas at least 24 hours before treatment begins. Signs provide information on scheduled treatment dates and type of treatment.

FW-93: Treatment of dispersed recreation areas accessible by trails have signs posted at all major points of entry. Signs are in place at least 24 hours before treatment begins. The signs provide information on date and type of treatment in order to allow visitors to minimize or avoid exposure.

Herbicides

FW-94: Method and timing of application are chosen to achieve project objectives while minimizing effects on non-target vegetation and other environmental elements. Selective treatment is preferred over broadcast treatment. Application methods from most to least selective are:

- Cut surface treatments;
- Basal stem treatments;
- Directed foliar treatments;
- Soil spot (spot around) treatments;
- Soil spot (spot grid) treatments;
- Manual granular treatments;
- Manual/mechanical broadcast treatments;
- Helicopter treatments.
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FW-95: Herbicides and application methods are chosen to minimize risk to human and wildlife health and the environment. No class B, C, or D chemical (See Table 2-6) may be used on any project without the approval of the Regional Forester. Vegetable oil is used as the herbicide carrier when available and compatible with the proposed application.

Table xx. Classification of chemical/method combinations when used at typical rates and exposures

Application Method	Class			
	A	B	C	D
Manual ground:				

Cut surface	Dicamba Glyphosate Imazpyr	Picloram Triclopyr Amine	2, 4-D Amine		
Basal stem	Diesel Kerosene Limonene	Triclopyr Ester 2, 4-DP	2, 4-D Ester		
Soil Spot	Hexazionone				
Foliar Spray	Fosamine Glyphosate Hexazionone Imazpyr Kerosene	Limonene Picloram Sulfometuron Methyl Triclopyr Amine Triclopyr Ester	2, 4-D Amine 2, 4-D Ester 2, 4-DP	Tebuthiuron	
Mechanical ground	Diesel Dicamba Fosamine Glyphosate Hexazionone Imazpyr	Picloram Sulfometuron Methyl Triclopyr Amine Triclopyr Ester 2, 4-DP	2, 4-D Amine 2, 4-D Ester Tebuthiuron		
Aerial	Diesel Fosamine Glyphosate Hexazionone Imazpyr Kerosene	Limonene Picloram Sulfometuron Methyl Triclopyr Amine Triclopyr Ester 2, 4-DP	2, 4-D Amine 2, 4-D Ester Tebuthiuron		

FW-96: Areas do not undergo prescribed burning for at least 30 days after herbicide treatment.

FW-97: Aerial application with herbicides is allowed only in utility corridors. Each aerial herbicide application must have an operations plan to ensure that:

- Adequate precautions are taken to protect the crew, including equipment certification and hazard identification;
- Areas to be aerially treated are clearly marked; and
- Methods used to avoid buffers and other sensitive areas are safe and effective.

FW-98: No herbicide is aerially applied within 200 horizontal feet of an open road or designated trail. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

FW-99: No herbicide is aerially applied within 300 feet, nor ground-applied within 60 feet, of any known threatened, endangered, proposed, or sensitive plant, except where its use is necessary to control non-native invasive species affecting federally listed or sensitive species. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

FW-100: No herbicide is aerially applied within 200 horizontal feet, nor ground-applied within 30 horizontal feet, of lakes, wetlands, perennial or intermittent springs and streams. No herbicide is applied within 100 horizontal feet of any public or domestic water source. Selective treatments (which require added site-specific analysis and use of aquatic-labeled pesticides) may occur within these buffers only to prevent significant environmental damage such as non-native invasive plant infestations. Buffers are clearly marked before treatment, so applicators can easily see and avoid them.

FW-101: With the exception of utility corridor and road rights-of-way, no herbicide is broadcast within 100 feet of private land or 300 feet of a private residence, unless agreed to by the landowner. Buffers are clearly marked so applicators can easily see and avoid them.

FW-102: ~~No soil-active herbicide is applied within 30 feet of the drip line of reserved vegetation (e.g. den trees of hardwood inclusions) or within 30 feet of the drip line of vegetation adjacent to the treated area.~~ **MODIFICATION to address nonnative invasive plant treatments** - No soil-active herbicide should be ground applied within 30 feet of the drip line of non-target vegetation specifically designated for retention (e.g., den trees, hardwood inclusions, adjacent untreated stands) within or next to the treated area. However, chemical side pruning can occur in this buffer if necessary using herbicide with potential soil-activity, but movement of herbicide to the root systems of non-target plants must be avoided. Buffers should be clearly marked before treatment so applicators can easily see and avoid them.

FW-103: Aquifers and public water sources are identified and protected.

FW-104: Application equipment, empty herbicide containers, clothes worn during treatment, and skin are not cleaned in open water or wells. Mixing and cleaning water must come from a public water supply and be transported in separate labeled containers.

FW-105: Herbicide mixing, loading, or cleaning areas in the field are not located within 200 feet of private land, riparian corridors, open water or wells, or other sensitive areas.

FW-106: ~~No herbicide is broadcast on rock outcrops or sinkholes. No soil-active herbicide with a half-life longer than 3 months is broadcast on slopes over 45%, erodible soils, or aquifer recharge zones. Such areas are clearly marked before treatment so applicators can easily see and avoid them.~~ **MODIFICATION to address nonnative invasive plant treatments.** Stem-specific treatments should be done on rock outcrops or sinkholes. No soil-active herbicide with a half-life longer than 3 months should be broadcast on slopes over 45 percent or on aquifer recharge zones. Such areas should be clearly marked before treatment so applicators can easily see and avoid them.

FW-107: Weather is monitored and the project is suspended if temperature, humidity, or wind becomes unfavorable as shown in Table 2-7. **NOTE**: The following table is applicable to pesticides, not just herbicides.

Table xx. Unacceptable Weather Conditions for Herbicide Application

	Temps Higher Than	Humidity Less Than	Wind (at Target) Greater Than
Ground:			
Hand (cut surface)	N.A.	N.A.	N.A.
Hand (other)	98F	20%	15 mph
Mechanical (liquid)	95F	30%	10 mph
Mechanical (granular)	N.A.	N.A.	10 mph
Aerial: Granular	N.A.	N.A.	8 mph

FW-108: Nozzles that produce large droplets (mean droplet size of 50 microns or larger) of streams of herbicide are used. Nozzles that produce fine droplets are used only for hand treatment where distance from nozzle to target does not exceed 8 feet.

FW-xxx: NEW STANDARD **Herbicides should be applied at the lowest rate effective in meeting project purposes and according to guidelines for protecting human (NRC 1983) and wildlife health (EPA 1986a). Application rate and work time should not exceed levels that pose an unacceptable level of risk to human or wildlife health. If the rate or exposure time being evaluated causes the Margin of Safety or the Hazard Quotient computed for a proposed treatment to fail to achieve the current Forest Service R-8 standard for acceptability (acceptability requires a MOS > 100 or, a HQ of <= 1.0 depending on the methodology employed in the risk assessment to reflect potential risk), additional risk management is to be undertaken to reduce unacceptable risks to acceptable levels or an alternative method of treatment should be used. At present the most current FS risk assessments (found on the WO website; produced for the FS by Syracuse Environmental Research**

Associates (SERA)) employ HQ so the standard is <= 1.0. Should contractor or methodology change during this planning period, an at least equally restrictive standard should be imposed to define acceptable risk.

Salvage

FW-109: The maximum size of openings allowed for harvesting timber as a result of fire, wind, ice, snow, and insect attacks will be determined on a case-by-case basis.

FW-110: There are no dispersion requirements for salvage treatment areas.

FW-xxx: **NEW STANDARD** When leaving a partial forest canopy during a salvage operation resulting from a forest pest (e.g. gypsy moth or southern pine beetle), tree species susceptible to that pest should not be retained.

FW-xxx: **NEW STANDARD** In order to favor desirable species, consider post-harvest salvage treatments on lands suitable for timber harvest with site index 70+, including:

- Installation of tree shelters on existing advanced reproduction of hardwood species.
- Planting of hardwood species at approximately 45 feet spacing (22 trees per acre) where natural advanced reproduction is inadequate.
- Release of trees in tree shelters from competing vegetation.

Harvesting Methods

FW-111: Use advanced harvesting methods on sustained slopes ~~45~~ **MODIFICATION: 35** percent or greater to avoid adverse impacts to the soil and water resources. Use advanced harvest systems on sustained slopes over 20 percent when soils have a high erosion hazard or are failure-prone.

Rotations

FW-112: Rotations are specified under the management prescriptions that are suitable for timber production.

FW-113: Allow harvesting of trees prior to rotation age during the first cutting cycle in order to meet long-term desired condition of a particular management prescription. Regeneration harvesting cuts are not scheduled prior to culmination of mean annual increment.

Working Group	Rotation Ages
Upland hardwoods	80-180
Cove hardwoods	70-180

White pine	60-100
Yellow pine	60-100
Scarlet oak/Black oak	60-100

Age Working Groups Reach CMAI

Working Group	CMAI Age
White Pine	55
Mixed pine-hardwood	55
Upland Hardwoods	65
Southern Yellow Pine	45

Even-aged and Two-aged Management

FW-114: The maximum size of an opening created by even-aged or two-aged regeneration cutting is 40 acres in Virginia and 25 acres in West Virginia. Exceptions to these acreage limitations may be permitted following review by the Regional Forester. These acreage limits do not apply to areas treated because of natural catastrophic conditions such as fire, insect or disease attack, or windstorm. Areas managed as permanent openings (e.g., meadows, old fields, wildlife openings, roads, and utility corridors) are not subject to these standards and are not included in calculations of opening size, even when within or adjacent to created openings.

FW-115: Separate even-aged or two-aged harvest units from each other by a minimum distance of 330 feet (5 chains). Such openings may be clustered closer than 330 feet as long as their combined acreage does not exceed the maximum opening size. An even-aged regeneration area will no longer be considered an opening when the certified reestablished stand has reached an age of 5 years.

FW-116: Even-aged or two-aged regeneration cutting may be scheduled next to uneven-aged stands at any time.

Regeneration Harvests

FW-117: Regeneration cutting on lands suitable for timber production must be done under a regeneration harvest method where adequate stocking of desirable species is expected to occur within 5 years after the final harvest cut. The new stand must meet the minimum stocking levels as described in Table 2-10. These apply to both artificial and natural means of stand regeneration. Where natural means are used and stand re-establishment has not been accomplished within 3 years after committing the stand to regeneration, the stand is re-examined for further treatment needs.

Forest Type	Number of Stems Per Acre[1]

	Minimum Level	Desired Level	Maximum Level
White Pine	150	250 - 300	500
Mixed pine-hardwood	200	400 - 600	900
Hardwoods	150	250 - 300	500
Yellow Pine	300	500 – 700	900

[1]The levels are guides and are used in conjunction with professional judgment to determine acceptable restocking levels for a specific site.

FW-118: No heavy equipment is used for site preparation on sustained slopes over 35 percent or sustained slopes over 20 percent when soils have a high erosion hazard or are failure-prone.

Uneven-aged Management

FW-119: Uneven-aged regeneration methods are limited to lands (except as noted below) that are at least 100 acres in size, with slopes less than 30 percent, and within ½ mile of existing roads. Uneven-aged harvest methods can occur on slopes steeper than 30 percent with low impact harvesting systems.

FW-120: Uneven-aged regeneration methods are allowed on lands other than listed in FW-119 when site-specific project objectives include canopy gap creation, scenic enhancement, or restoration/enhancement of old growth forest conditions.

FW-121: There are no dispersion requirements for openings created by uneven-aged regeneration methods. Cutting cycles will vary from 5-20 years depending upon management objectives.

FW-122: The maximum size limit of group selection openings is 2 acres.

Non-Timber Forest Products

FW-123: Unless specifically designated on use permits, collection of non-timber forest products (other than fuelwood) is prohibited within 100 feet of roads and trails in order to disperse collection impacts. Cutting of dead or down trees by personal use permit for fuelwood purposes is allowed Forest-wide from existing roads, except where prohibited by management prescription direction.

FW-124: Collection of botanical products is subject to the following restrictions:

- Commercial moss collection is prohibited.
- Collection within 50 feet of a perennial or intermittent stream is limited to those species that cannot be feasibly collected on upland sites (i.e., no collection of *Rhododendron* is allowed within riparian areas because it can be collected on upland sites.)
- For ground disturbing activities (transplants, root digging, etc.) a maximum of 10 plants will be allowed per permit, with no more than one permit sold to an individual per month.

- Non-destructive collection activities (seed collection, cuttings, etc.) are allowed for all species, ~~except Fraser fir.~~ Species does not occur on GWNF
- ~~Prohibit collection of Fraser fir seedlings, seeds and cones.~~ Species does not occur on GWNF

Log Landings and Skid Trails

FW-125: Log landings will be located outside of riparian corridors.

FW-126: All equipment used for harvesting and hauling operations will be serviced outside of riparian corridors.

FW-127: ~~Ruts will be smoothed to restore hydrology and drainage paths.~~

FW-128: When necessary, landings will be ripped to a depth of 6-8 inches to break up compaction, and to ensure soil productivity and the successful reestablishment of vegetation.

FW-129: Skid trails may cross riparian corridors at designated crossings. If crossing a perennial or intermittent stream is unavoidable, use a temporary bridge or other approved method within the State Best Management Practices (BMPs). All streams are crossed at as close to a right angle as possible. Restoration of skid trails will occur as soon as possible to mitigate impacts.

FW-130: ~~When removing felled trees from areas of hydric soils, use methods that avoid rutting or displacing soil (i.e., use of low ground pressure skidders).~~

FW-131: Skidding of trees should be directed in a manner that prevents creation of channels or gullies that concentrate water flow to adjacent streams.

FW-132: Temporary stream crossings will be removed and rehabilitated.

FW-133: Dips or waterbars or other dispersal methods will be constructed and maintained to direct stormwater off skid trails and reduce potential sediment flow to streams.

FW-xxx: **NEW STANDARD** Designated trails will not be used as skid trails. Crossing of designated trails should be minimized and should occur at right angles to the extent feasible. Implement needed restorative measures to damaged trail tread and profile as soon as practicable upon completion of vegetation management activities.

Fire

FW-xxx: **NEW STANDARD** When used for control lines, trails (including tread, structures and improvements) will be restored to pre-burn conditions as soon as practicable.

FW-xxx: **NEW STANDARD** Fire control lines (whether constructed by hand or mechanically) that tie into travelways (trails, roads, etc.), will be obliterated and the topography restored to original contour as soon as possible following the fire.

Wildland Fire Suppression

FW-134: Ensure firefighter and public safety as the first priority. Secondly, protect property and natural and cultural resources based on the relative values to be protected. *(FSM 5103.1(1) & 5130.43(1))*

FW-135: Suppress human-caused wildland fires (either accidental or arson). *(FSM 5103.2(2))*

FW-136: The full range of suppression tactics (from full suppression to monitoring) may be used, consistent with forest and management prescription area direction. *(FSM 5131.13(2) & (3))*

FW-137: Suppress wildland fires at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.

FW-138: Where needed to prevent erosion, firelines are revegetated and water-barred promptly after the fire is controlled.

Unplanned Natural Ignitions Use

FW-139: ~~The management of lightning caused wildland fires is allowed when the Fire Management Plan is completed and a Wildland Fire Implementation Plan is approved for the specific wildland fire.~~ **MODIFICATION:** If a lightning fire ignites and becomes established, procedures in the Unplanned Natural Ignitions Use Implementation Procedures Reference Guide should be used.

FW-140: Lightning-caused fires are allowed to play their natural ecological role as long as they occur within prescribed weather and fuel conditions and do not pose unmitigated threats to life and/or private property, particularly to that property within the wildland/urban interface zone.

Prescribed Fire

FW-141: Use existing barriers, e.g. streams, lakes, wetlands, roads, and trails, whenever possible to reduce the need for fireline construction and to minimize resource impacts.

FW-142: Best available smoke management practices will be used to minimize the adverse effects on public health, public safety and visibility in Class I areas (James River Face Wilderness and Shenandoah National Park) from prescribed fire.

FW-143: Conduct prescribed burning only if meteorological conditions ensure that smoke will be carried away from areas with a high forecasted Air Quality Index (Orange or higher).

FW-144: All managed burns will comply with Smoke Management Programs for Virginia and West Virginia, when these are implemented. (Per EPA's "Interim Air Quality Policy on Wildland and Prescribed Fires" which was developed with involvement of the USDA Forest Service).

FW-145: Identify caves or abandoned mines that contain significant populations of bats as smoke-sensitive targets. Avoid smoke entering these caves or mines when bats are ~~present.~~ **MODIFICATION:** hibernating (generally this is Nov 1 to April 1).

FW-146: Do not conduct prescribed fires when the Keetch-Byram Drought Code (Cumulative Severity Index) is 200 points above the average for the relevant time of the year.

FW-147: Do not plan prescribed fires in mesic deciduous forest communities (northern hardwood, mixed mesophytic, and river floodplain hardwood) that do not contain a significant oak component. When practical and without resulting in increased fireline construction **ADDITION: or jeopardizing firefighter safety**, avoid burning these communities when implementing prescribed fires in adjacent forest communities.

FW-148: When necessary to include mesic deciduous forest communities within burning blocks, direct firing will not be done unless necessary to secure control lines. In these cases, allow low intensity fires. Exceptions are allowed when the fire is designed to encourage oak regeneration.

FW-149: Maintain and restore Table Mountain pine and pitch pine forests through moderate to high intensity prescribed fires.

Other Fuels Treatment

FW-150: Only mowing, chopping, or shearing treatments are used on sustained slopes over 15 percent. No heavy equipment is used for mechanical fuels treatments on sustained slopes over 35 percent. Mechanical fuels treatments are prohibited on sustained slopes over 20 percent when soils have a high erosion hazard or are failure-prone.

Other Guideline Sources

FSM 5100, FSM 5130, FSM 5144

Recreation

Developed Recreation

FW-151: Manage developed recreation areas according to Management Prescription Area 7D.

Dispersed Recreation

FW-152: Disabled hunter access is provided on roads and trails specifically designated for such use.

Backcountry Recreation

FW-153: Manage backcountry recreation areas according to Management Prescription Area 12D.

Trails

(DRAFT GW) Management activities along system trails should be implemented with sensitivity to the users. Measures to reduce the visibility of activities might include vegetative screening; the temporary re-routing of trail segments; temporary trail closure, and denoting project time to occur outside high use periods.

FW-154: The Appalachian Trail standards are addressed in the standards for Management Prescription Area 4A.

FW-155: Trails are closed to motorized recreation use unless designated otherwise.

FW-156: Motorized use of the trail system is permissible for administrative purposes, emergencies, and at road crossings, when the trail is specifically designated for motorized use, or when the trail is on or coincident with an open public road.

FW-157: Any new trail construction or reconstruction is carefully located to avoid impacts to threatened, endangered, sensitive, or locally rare species habitat.

FW-158: Management activities along system trails shall be implemented with sensitivity to the experience of the users. Appropriate techniques to mitigate the effects of management activities are addressed during site-specific project analysis. Measures to mitigate the effects of activities might include vegetative screening; the temporary re-routing of trail segments; temporary trail closure, avoidance and reclamation; and timing of project implementation to reduce impacts during high use periods.

FW-159: If unacceptable resource damage is identified, that section of the trail will be closed, and be re-routed if possible, until the damage is repaired. **ADDITION: Trail could be permanently closed if necessary.**

Universal Accessibility

(DRAFT GW) Projects should be designed following FSM 2330/2350 on universal access, which incorporates compliance with the Architectural Barriers Act of 1968 (ABA) and Section 504 of the Rehabilitation Act of 1973 with implementation using the following guides: the *Architectural Barriers Act Accessibility Standard*s (ABAAS), the *Forest Service Outdoor Recreation Accessibility Guidelines* (FSORAG), and the *Forest Service Trail Accessibility Guidelines* (FSTAG).

Recreation Opportunity Spectrum

FW-160: The Recreation Opportunity Spectrum (ROS) inventory completed for this Forest Plan is displayed on a Map accompanying this Forest Plan. The Standards in this section and under each Management Prescription in Chapter 3 refer to this inventory.

FW-161: New structures and facilities are constructed and maintained to meet the adopted ROS class for the area.

FW-162: Recreation opportunity maps will govern all new projects, including special uses. Existing conditions may not meet the assigned ROS classes.

Exceptions to the following six standards are made for fire management and valid existing rights and leases.

NOTE: The Jefferson Forest Plan used a Semi-Primitive 2 class to buffer the limited semi-primitive areas existing on the forest. The GWNF has more semi-primitive areas, most of which will be protected in the Management Prescription Area 12D for backcountry recreation or Management Prescription Area 1A for designated wilderness.

FW-163: ~~Prohibit new road construction, including temporary roads, in semi-primitive non-motorized areas. These areas do not contain any improved roads. Motorized recreational uses are prohibited within semi-primitive non-motorized areas. Administrative motorized uses, such as those associated with fire suppression, prescribed burning, maintenance of wildlife openings, or forest health needs are allowed.~~

FW-164: **MODIFICATIONS: Any** ~~Prohibit~~ new permanent road construction within semi-primitive motorized **and non-motorized** areas **that are outside of Management Prescription Areas 1A and 12D will be limited to roads that are closed after the immediate resource access need is met.** Road restoration and maintenance is limited to that necessary to protect soil, water, and biological resources. Road restoration is done in such a manner as to maintain the unimproved nature of the road. Temporary road construction within semi-primitive motorized **and non-motorized** areas is allowed provided such roads are obliterated following the temporary use.

FW-165: Maintain existing unimproved roads and motorized trails within semi-primitive motorized areas to a standard necessary to protect soil, water, and biological resources while maintaining an off-highway type recreation experience.

FW-166: ~~**Semi-primitive 2** areas are designated under this Forest Plan to prevent loss of semi-primitive non-motorized and semi-primitive motorized recreation opportunities. Management activities and uses, including but not limited to timber harvest, prescribed burning, livestock grazing, off-highway vehicle use, mineral leasing, and special use authorizations, are allowed provided such use will not result in a loss of semi-primitive non-motorized or semi-primitive motorized recreation opportunities.~~ Not applicable to the GWNF.

FW-167: ~~Prohibit new permanent road construction within **semi-primitive 2** areas. Road restoration and maintenance is allowed provided an unimproved or temporary road is not converted to an improved or permanent road. Allow temporary road construction in semi-~~

~~primitive 2 areas, provided such roads are decommissioned following the temporary use.~~ Not applicable to the GWNF.

FW-168: ~~Maintain existing improved roads within **semi-primitive 2** areas when necessary to achieve the desired condition of the appropriate management prescription. Decommission unneeded roads in these areas.~~ Not applicable to the GWNF.

Off-Highway Vehicles (OHVs) and All-Terrain Vehicles (ATVs)

FW-169: Designated ~~routes for full size off road vehicles and~~ **(The Forest Plan will not 'designate' OHV routes)** use areas for ATVs are managed under Management Prescription 7C.

FW-170: OHV use on open public roads is limited to licensed vehicles and operators that comply with motor vehicle laws of the state.

FW-171: Full size off road vehicles are permitted on Forest Service roads open to the public. These vehicles must be street legal and properly licensed. Trail use is not permitted.

FW-172: ATVs are restricted to routes (roads and trails) specifically designated as open to such vehicles.

FW-173: Cross-country motorized use, off open and designated roads and trails, is prohibited except in the case of emergency, e.g. wildland fire or search and rescue.

FW-174: ~~Consideration of new ATV Use Areas begins with a screening process. Demand for new routes and use areas is determined and documented. In measuring demand, the following factors are normally included: the commitment of a club for assistance with construction, maintenance, patrolling and monitoring; significant number of requests by users or other citizens to provide facilities; demonstrated conflicts with other Forest users; and existing uncontrolled use~~. **MODIFICATION: Improving and expanding existing ATV trails is given priority consideration over designating new areas.**

FW-175: OHV **ADDITION: and ATV** routes are preferred that can provide a two-hour or longer riding experience and that have looping characteristics or are a part of a larger transportation system. Routes that provide access for disabled visitors or seasonal hunters may be exceptions.

FW-176: Candidate roads and trails are eliminated or mitigating measures are planned where soil and water quality cannot be maintained within acceptable standards.

FW-177: OHV routes are selected that avoid sensitive areas including, but are not limited to, threatened, endangered, and sensitive species habitat, rare communities, and native brook trout streams.

FW-178: Following evaluation, new routes and use areas are incorporated into Management Prescription 7C. In the case of a new ATV Use Area, this will be done through a forest plan amendment.

FW-179: New routes and use areas can only be considered in Management Prescriptions designated as suitable for such uses.

Wilderness Management

FW-180: ~~Review all Prevention of Significant Deterioration (PSD) permits within 200 km of the Class I area that might affect current AQRV using screening procedures specific to the James River Face Wilderness and federal land manager AQRV guidance.~~ Not applicable to the GWNF.

FW-181: ~~Participate in regional planning organizations (such as VISTAS) that are examining ways to reduce impacts to visibility and other AQRVs in Class I areas of the region.~~ Not applicable to the GWNF.

Wild & Scenic River Management

See Management Prescription Areas 2C2 and 2C3.

FW-182: Protect the outstandingly remarkable values and free-flowing condition of the eligible Wild and Scenic River segments.

Scenery

Table xx. Relationship between the new Scenery Management System (SMS) and the old Visual Management System (VMS)

New SMS-Scenic Integrity Objectives	Appearance	Old VMS-Visual Quality Objectives
Very High	Unaltered	Preservation
High	Appears Unaltered	Retention
Moderate	Slightly Altered	Partial Retention
Low	Moderately Altered	Modification

FW-183: The Scenery Management System guides protection and enhancement of scenery on the George Washington National Forest. The Scenic Class inventory, including Landscape Visibility, Concern Level, and Scenic Attractiveness, is maintained, refined, and updated as a result of site specific project analysis. The Standards under each Management Prescription Area refer to Scenic Class inventory as updated.

FW-184: The Forest Scenic Integrity Objectives (SIOs) Maps govern all new projects (including special uses). Assigned SIOs are consistent with Recreation Opportunity Spectrum management direction. Existing conditions may not currently meet the assigned SIO.

FW-185: Lands mapped as Concern Level 1 middleground from travelways (see glossary) and use areas will be inventoried as Scenic Class 2 or higher and will be managed for an SIO of Moderate or higher.

FW-186: Shape and orient vegetative management openings in the forest canopy to contours and existing vegetation patterns to blend with existing landscape characteristics. Shape and feather edges in High and Moderate SIO areas. Some edges may not need feathering to meet the SIO. Do not use geometric shapes.

FW-187: In seed-tree and shelterwood methods, in High and Moderate SIO areas, delay removal of overstory until understory is 10 feet or more in height.

FW-188: Apply leave tree and unit marking to not be visible within 100 feet of concern level 1 and 2 travelways and use areas.

FW-189: Remove, burn, chip or lop slash when visible within a 100-foot zone of concern level 1 & 2 travelways and use areas. These treatments result in an average slash height of 2 feet of the ground.

FW-190: Design and construct roads to blend with the desired landscape character in form, line, color and texture.

FW-191: During temporary or permanent road construction, eliminate or remove from view, slash and root wads in the immediate foreground in High and Moderate SIO zones to the extent

possible. Some slash may be aligned parallel to roads at the base of fill slopes to collect silt.

FW-192: Remove or place out of sight root wads and other unnecessary debris within 150 feet of key observation points on concern level 1 and 2 travelways and use areas.

FW-193: Locate bare mineral soil areas from log landings, roads and bladed skid trails out of view from concern level 1 and 2 travelways and use areas, when practical.

FW-194: Cut stems to within approximately 6 inches of the ground when doing roadside maintenance and utility crossing maintenance at roads and trails.

FW-195: Exclude gravel pits and borrow areas from the seen area of visually sensitive concern level 1 and 2 travelways and use areas.

FW-196: Accomplish mowing or bush hogging prior to roadside herbicide treatment in Very High and High SIO areas.

FW-197: Revegetate cut and fill soil slopes.

FW-198: Structures have finishes that reduce contrast with the desired landscape character.

FW-199: Selectively remove trees to ~~improve amenities within~~ enhance views from high use areas, vista points, and along interpretive trails.

FW-200: When consistent with other objectives, favor flowering and other visually attractive trees and understory shrubs when leaving vegetation.

FW-201: Favor 14 inch and larger trees in a mixture with other smaller sized tree stems when creating spatial diversity along travelways and in recreation use areas. Provide a range of tree diameters.

FW-202: When engaged in scenery enhancement activities, introduce or favor native wildflowers, shrubs, and/or trees with showy flowers, fall foliage, and/or fruits.

Heritage Resources

FW-203: Coordinate inventory, evaluation, nomination, protection, enhancement, and interpretation procedures with the appropriate State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (ACHP), and Tribal Historic Preservation Officer (THPO) as necessary before project decisions.

FW-204: Projects are designed to avoid, minimize, or mitigate negative effects on potentially significant heritage resources. In-place protection of identified sites is the minimum requirement until site significance is determined.

FW-205: Evaluations are scheduled and conducted if a project would have any effect on a heritage resource potentially eligible for the National Register of Historic Places. Evaluations are scheduled and conducted if the responsible official and State Heritage Preservation Office (SHPO) disagree on whether a heritage resource is potentially eligible for the National Register of Historic Places.

FW-206: Decision documents (Record of Decision, Decision Notice or Decision Memo) will evidence compliance with the NHPA, 36 CFR 800, and other Heritage-related regulations, as appropriate. A project (or undertaking) not in compliance will be suspended by the Forest Supervisor until compliance is documented.

FW-207: A consultation with the SHPO and Advisory Council on Historic Preservation is in order when it is determined that the project would affect an eligible site, and the project cannot be relocated or modified to avoid the site.

FW-208: Consultation will include, when necessary, federally recognized Native American tribes with geographic or cultural ties to the Forest, pursuant to provision in the Archeological

Resources Protection Act (ARPA), American Indian Religious Freedom Act (AIRFA), Native American Graves Protection and Repatriation Act (NAGPRA), and the Region 8/Region 9 Treatment of Human Remains Policy. Forest Heritage staff will develop mechanisms for consultation. Provide for traditional use or collection of forest resources by Native Americans.

FW-209: A determination of effect, in coordination with SHPO, must be carried out in the event that a heritage resource determined eligible for or included on the National Register of Historic Places cannot be avoided, or the project delayed, and if the proposed project could affect the property either beneficially or negatively.

FW-210: Ensure that Section 106 compliance clauses are inserted in contracts and sales documents, and that clauses are discussed in pre-work conferences.

FW-211: If additional evidence or information regarding a "not significant" property becomes available, it will be re-evaluated.

Other Guideline Sources

Memorandum of Understanding with Eastern Band of Cherokee Indians
Programmatic Memorandum of Agreement between the USDA Forest Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (1985)
National Historic Preservation Act, 1966

Rangeland Resources

FW-212: Where rangeland facilities or practices are identified as contributing to the degradation of water quality, aquatic species, scenic resources, rare communities, or federally listed or sensitive species habitat, remedial actions may include changes in management strategy, alternation, temporary closure, relocation, or discontinuance of the permit.

FW-213: ~~Term grazing permits are preferred over other permit types because of their stronger controls, management flexibility, and Fee Credit availability.~~ Not applicable to the small range program on the GWNF.

Minerals and Geologic Resources
Geologic Resources

FW-214: Locate and design facilities and management activities to avoid, minimize, or mitigate negative effects on geologic resources with identified values (scientific, scenic, paleontologic, ecological, recreational, drinking water, etc.).

FW-215: Identify, using the appropriate type and scale of geologic mapping, the geologic components (processes, structures, materials, and landforms), **ADDITION: such as groundwater and karst, relevant to proposed projects, and integrate the components into: 1) siting and design of the project; 2) restoration; 3) ecological sustainability; and 4) environmental analysis.**

FW-xxx: **NEW STANDARD** Locate and design projects to minimize potential adverse effects on groundwater and groundwater dependent ecosystems. In karst areas, integrate geologic assessment in project design and monitoring.

Geologic Hazards

FW-216: Locate, design, and maintain trails, roads, other facilities, and management activities to avoid, minimize, or mitigate geologic hazards **ADDITION: and potential impact on infrastructure and public safety.**

FW-xxx **NEW STANDARD** For ground-disturbing projects on slope gradients of 50% or greater located upslope and within one-half mile of Forest external boundary, conduct a geologic hazard and risk assessment of off-Forest public safety for landslides, including debris flows.

Federal Leasable Minerals - General

FW-217: Following exploration and production operations, the permittee is responsible for reclaiming disturbed sites in accordance with an approved reclamation plan. Reclamation shall meet the requirements of 36 CFR 228. Plans will consider opportunities to enhance the desired condition of the particular management prescription.

Federal Leasable Minerals - Oil and Gas

FW-218: The Regional Forester makes administratively available and consents to lease those lands on the Forest, which have not been specifically noted as Congressionally withdrawn or administratively unavailable in the management prescriptions. **MODIFICATION:** Standard lease terms and conditions under Forest Service stipulations are used; additional stipulation may be specified by the individual management prescription. This consent is valid until the Forest Service provides the Bureau of Land Management written notification that consent is being withdrawn or amended.

FW-219: ~~The Regional Forester makes administratively available and consents to lease with a No Surface Occupancy stipulation semi-primitive non-motorized, semi-primitive motorized, and semi-primitive 2 areas, which have not been specifically noted as Congressionally withdrawn or administratively unavailable in the management prescriptions, listed in Chapter 3.~~ Not needed on the GWNF. Individual management prescription area standards should cover needed additional stipulations.

FW-220: Operations will comply with environmental protection standards from several sources: Forest Plan standards for the management prescription where the operations will occur; lease terms and conditions; federal Onshore Oil and Gas Orders; Oil and Gas Resources regulations (36 CFR228 E); Conditions of Approval in Applications for Permits to Drill; and Federal and State requirements and regulations promulgated to establish performance standards for protecting soil, water, riparian, and aquatic resources and for reclamation of areas affected by oil and gas activities.

Federal Leasable Minerals - Other than Oil and Gas

FW-221: When not specifically noted in the individual management prescription as Congressionally withdrawn or administratively unavailable, other Federal leasable minerals are available.

Federal Leasable Minerals - Coal

FW-222: Operations will follow Federal and State rules and regulations promulgated to establish performance standards for protecting soil, water, riparian, and aquatic resources and values; and for restoration and reclamation of areas affected by mining activities. Such rules and regulations include requirements for protection of surface and groundwater quantity and quality; prevention and control of acid mine drainage, erosion, and sediment deposition; and protection of streams and hydrologic balance.

Mineral Materials

FW-223: Mineral materials (36 CFR 228c) are available for commercial, personal, free, and administrative uses.

Rock, Mineral, and Fossil Collection

FW-224: Except for archaeological sites, caves, or in Wilderness, the public can collect small quantities of rocks, minerals, and invertebrate fossils for non-commercial purposes (scientific, educational, and recreational, including recreational gold panning). If such activities would involve motorized excavation equipment or significant disturbance, then a Permit would be required. Collecting for commercial purposes requires a Permit.

Reserved and Outstanding Minerals

FW-225: The exercise of outstanding rights shall be in accordance with terms of the deed of separation, as well as applicable State and Federal laws and regulations.

FW-226: The exercise of reserved rights shall be in accordance with the deed, the Secretary of Agriculture's rules and regulations within the deed, and applicable State and Federal laws.

FW-227: The Forest Plan, including Management Prescriptions and Forest-wide Direction, is subject to outstanding and reserved mineral rights. The government may seek to acquire private mineral rights through purchase, exchange or donation in the following areas: designated Wilderness; designated Wild and Scenic Rivers; and Special Biological Areas. Until such private rights are acquired, the exercise of reserved and outstanding mineral rights to explore and develop mineral resources will be respected.

FW-228: All projects (including special designations, grants and agreements, special uses, and interagency agreements) or consideration of special designations shall include a review of the status of private mineral rights. Where private rights could be negatively affected, the public involvement process will inform and seek comments from the current owners of private mineral rights. The potential effects on private mineral rights will be assessed.

FW-229: Where reserved or outstanding mineral rights are involved, the mineral owner is encouraged to implement all surface-disturbing activities outside riparian areas.

Other Guideline Sources
Oil and Gas Regulations (36 CFR 228e)
Federal Onshore Oil and Gas Orders and regulations

Infrastructure

Facilities, Roads and Access

FW-230: All existing open roads and trails should remain open for public travel unless any of the following occurs:

- Use causes unacceptable resource damage;
- The road or trail is unsafe for public use;
- Existing open road density within a management prescription is greater than objective;
- Use conflicts with management prescription or forest-wide direction;

- Closures or restrictions are needed to meet other resource needs.
- Funds will not be available to maintain the road or trail commensurate with Objective Maintenance Level; or
- Public right-of-way does not exist.

FW-231: New construction of local roads is managed as closed to public use unless the following conditions are met:

- Use is compatible with the recreation opportunity for the area;
- Public safety is provided for;
- Road serves an identified public need;
- The area accessed by the road and associated uses can be managed in accordance with management prescription and forest-wide direction considering available financial and personnel resources; or
- Funds are available for maintenance, or cost-sharing or volunteer maintenance can be arranged.

FW-232: Roads are seasonally or temporarily closed to motorized public use if there is a temporary or recurring need to:

- Prevent unacceptable resource damage;
- Prevent conflicts with the recreational opportunity established for the area;
- Protect property or public safety during resource management activities;
- The facility serves a seasonal or temporary management objective; or
- Reduce the need for additional maintenance associated with damage to the roadbed and/or surface that might occur during adverse weather or seasonal conditions.

Road Construction

FW-233: Roads are designed and constructed to the standard necessary to provide access and manage resources according to management prescription desired conditions and public safety.

FW-234: Use ~~staged~~ revegetation during seeding seasons on construction sites where slopes are greater than 5%.

FW-235: All new and reconstructed roads will blend into the landscape to the extent practical.

FW-236: may conflict with FW-164, we wouldn't build permanent roads for emergency. **FW-163. MODIFICATION: Temporary roads are allowed in semi-primitive non-motorized areas** that are outside of Management Prescription Area 12D areas.

Road Maintenance

FW-237: Maintenance, reconstruction to a higher standard, or relocation of an existing road is allowed to reduce environmental damage, to improve user safety, or where agreed, to be turned over to the State.

FW-238: Apply the level of maintenance needed to protect the investment, facilitate resource management, and provide for user safety.

Road Decommissioning

FW-239: Closed system roads are planted with native or desirable non-native wildflowers, forbs, shrubs, and/or grasses.

FW-240: Closed system roads and wildlife linear strips may continue to be used for administrative and emergency access.

Facilities

FW-241: Design and maintain facilities to incorporate the principles of sustainability, reflect their place within the natural and cultural landscape, and provide optimal service to customers and cooperators.

FW-243: Before old buildings and other man-made structures are structurally modified or demolished, they will be surveyed for bats. If significant bat roosting is found, maintain these structures or provide alternate roosts suitable for the species and colony size prior to building modification or destruction.

Lands and Special Uses

Special Use Authorizations

FW-244: Evaluate new special use authorizations using the criteria outlined in 36 CFR 251.54 and according to Forest Service policy. Limit to needs that cannot be reasonably met on non-NFS lands or that enhance programs and activities. Locate uses where they minimize the need for additional designated sites and best serve their intended purpose. Require joint use on land when feasible.

FW-245: Do not allow recreation residences.

FW-246: Do not authorize new individual well/spring permits. Phase out existing uses when possible, as this is usually a need that can be met on private land.

Linear Rights-of-Way and Communication Sites

FW-247: Develop and use existing corridors and sites to their greatest potential in order to reduce the need for additional commitment of lands for these uses. When feasible, expansion of existing corridors and sites is preferable to designating new sites.

FW-248: Following evaluation of the above criteria, decisions for new authorizations outside of existing corridors and designated communication sites will include an amendment to the Forest Plan designating them as Prescription Area 5B or 5C.

FW-249: Design new towers and ridge top developments to mitigate collision impacts to migratory birds through coordination of project planning and implementation with the U.S. Fish and Wildlife Service.

FW-250: Locate new communications equipment on existing towers or other structures where possible. Where new tower construction is unavoidable, structures will use minimum safety lights required by the Federal Aviation Administration, daytime visual markers on guy wires, and down-shielded security lighting. At sites that do not currently have towers in excess of 199 feet or those that require lighting, height of new towers will not exceed

199 feet above ground level and/or exceed the height at which the FAA requires that the tower has lighting.

FW-251: Require holders of communication use authorizations to remove communications towers no longer in use or determined to be obsolete.

FW-252: Design new corridors and sites to meet a scenic integrity objective as high as practicable.

FW-253: Specify management requirements for permittee access roads in the designated use permit, where roads are included in the authorization.

FW-254: Place distribution lines for utilities underground, unless the environmental impacts of doing so exceed those of placing them above ground.

Land Adjustment

FW-255: Land acquisitions will be guided by the following criteria:

Priority Acquisitions: (in order of priority)

1. Lands needed for the protection of federally listed endangered or threatened fish, wildlife, or plant species.
2. Lands needed for the protection of significant historical or cultural resources, when these resources are threatened or when management may be enhanced by public ownership.
3. Lands within Congressionally designated wilderness boundaries.
4. Lands that provide an unbroken public right-of-way for the Appalachian National Scenic Trail consistent with the current policy statement for Appalachian Trail acquisition.
5. Lands needed for protection and management of Congressionally designated areas, including wilderness.
6. Environmentally sensitive lands such as rare communities, wetlands and old growth.
7. Lands that promote more effective management of the ecosystem and reduce administrative expenses through consolidation of national forest system ownership.
8. Lands that enhance recreation opportunities, public access, and protection of aesthetic values.
9. Lands needed to enhance or protect watershed improvements that affect the management of National Forest riparian areas.
10. Consolidation of split estates.

FW-256: When compatible, manage new land acquisitions according to the adjacent or surrounding Management Prescription(s). When not compatible, conduct an environmental analysis and prepare the appropriate decision document to amend this Forest Plan.

FW-257: Land conveyances will be guided by the following criteria. Management Prescription 0B outlines the management of small, isolated land areas in Chapter 3 until they can be conveyed to private ownership.

1. Lands inside or adjacent to communities or intensively developed private land, and chiefly valuable for non-National Forest System purposes.

2. Parcels that will serve a greater public need in state, county, city, or other Federal agency ownership.

3. Inaccessible parcels isolated from other National Forest System lands. Parcels intermingled with private lands.

4. Parcels within major blocks of private land, the use of which is substantially for non-National Forest System purpose.

5. To support more efficient management, parcels having boundaries, or portions of boundaries, with inefficient configurations (projecting necks or long, narrow strips of land, etc.)

6. Parcels that have substantial structural improvements that are authorized under a special use permit/lease if overall goals and objectives can be met.

Right-of-Way Acquisition

FW-258: Access should be acquired through purchase or exchange from other agencies, states, counties, and private interests to assure management objectives are met for all ownerships.